

**Presentation to ERSE
Lisbon, 8 October 2018**

vaasa **ETT**

Emerging business models in the energy market & implications for market design and customers

**Dr Philip E Lewis, CEO, VaasaETT
CEO, VaasaETT**

Picture: Tibber (Norway, Sweden))

We analysis the dynamics of energy markets, customers and offerings globally

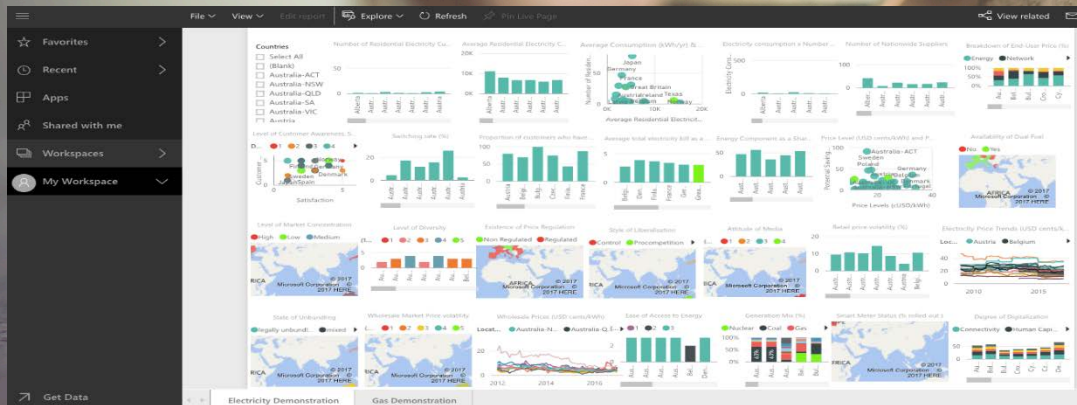
Clients include Governments, Regulators, Energy Companies, Industrial Consumers, Vendors, Investors, NGOs and other Stakeholders

Focus on 6 continents, 60+ markets

European Union's (DG Ener) source of up-to-date retail price data. Monthly collection from all 28 member markets

World's leading source of historical and current analysis of churn trends. The original source of the EUs definition of switching

The world's only experts to have tracked every liberalised electricity market globally since the onset of competition



Our case databases

200+ EE / DR pilots
200+ commercial models
100+ digital cases
600+ sample groups
1m+ residential customers

200 Smart
Grid Projects



176 Renewable
Integration Projects

Impact Evaluation Examples



Data from >5,000 smart meters for OWL, IBM, Landis and Gyr.



400 homes subjected to pricing signals and educational materials.



5 pilots (Enedis, ENEL, Verbund, Vattenfal, Endesa)



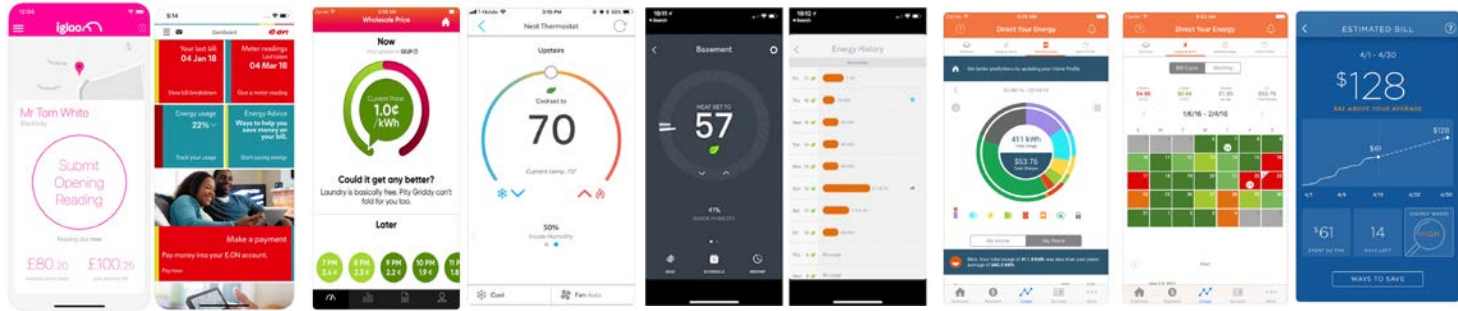
72 homes

Used in projects for projects/clients globally

e.g. European Commission (ADVANCED, NatConsumers...), Regulators (e.g. OFGEM, NVE), Associations (e.g. BEAMA, ESMIG), Retailers, Utilities, Investors.

Mobile apps

Mobile apps are a good starting point



Different apps for different models and people, especially millennials

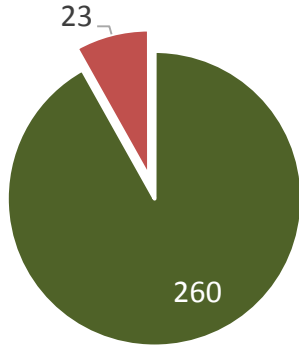


	MVP	Base	Millennials	
Service	Acquisition		✓	
	Meter Reading	✓	✓	
	Historical billing	✓	✓	
	Current billing	✓	✓	
	Projected billing	✓	✓	
	Account updates & service	✓	✓	
	Payment alerts	✓	✓	
	Consumption analytics			✓
	Renewals		✓	✓
	Plan switching			✓
Engagement	Cross/up-selling	✓	✓	

Pictures (top Left to right): Igloo (UK); E.ON UK (UK); Griddy (US); Reliant (US); Nest (US); Direct Energy (US); Bidgely (US) (Bottom left to right): Reliant (US); Just Energy US); Bidgely (US)

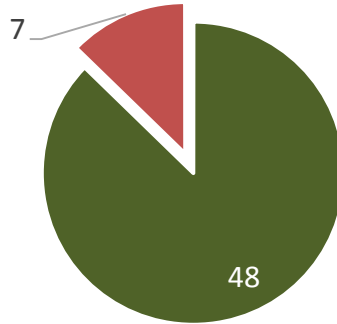
Mobile apps

Retailer / Vendor Case Selection



■ Investigated ■ Selected and Approached

Market Selection



■ Markets Scanned ■ Case Markets

Higher Satisfaction

20% higher for App users
when done well

The largest population to join these days are millennials... they're table stakes in any discussion.

Director of Innovation, Leading US retailer

Relationship Impact

A simpler relationship for customers, especially millennials; greater engagement; enabler of up-sell
But uptake takes effort*; Millennials still like personal contact; Does not lower operational costs

*Best uptake if at time of joining and if service access depends on it.

The Digital Friend

Digital that makes life simpler

Mit Deinem Smartphone hast Du alles im Griff

Je besser Du Deinen Energieverbrauch im Blick hast, desto einfacher wird es für Dich, Deine Energiekosten zu senken. Wir machen Dir das so leicht wie möglich.

Mit Deinem 4hundred-Konto hast Du immer den vollen Überblick. Logge Dich ein, um Deinen aktuellen Ökostrom- und/oder Gas-Verbrauch einzusehen, Deinen aktuellen Zählerstand zu übermitteln und Deinen Kontostand zu checken.

Außerdem kannst Du Dich in unserer Community einbringen, Fragen stellen, mit anderen Kunden chatten und uns Vorschläge machen, wie wir immer besser werden können. Wir freuen uns drauf, von Dir zu hören. Schalte Dich ein!



4hundred

Ein günstiger Preis für alle

Große Energiekonzerne verwirren Kunden mit komplizierten Tarifen und Angeboten. Bei uns ist das anders, bei uns ist es einfach und fair: Du bezahlst nur Deine exakten Energiekosten + eine geringe Grundgebühr von 8€ pro Monat. Das gilt für jeden Kunden, egal ob neu oder schon lange bei 4hundred.

Darmit gehört 4hundred zu den günstigsten Anbietern am Markt.



Mehr Vorteile für Dich!

- Mehr Gerechtigkeit!** Der gleiche, faire, günstige Preis für alle.
- Mehr Freiheit!** Monatlich kündbare Verträge für volle Flexibilität.
- Mehr Mitbestimmung!** In unserer Community hast Du das Sagen.
- Mehr Transparenz!** Du erfährst genau, wie sich Dein Preis zusammensetzt.
- Mehr Zukunft!** 100% Ökostrom und digitale Kommunikation.

Source: 4Hundred (Germany)

Careful: If the focus is cost reduction, the relationship may be weakened

THE Sun BIZ | NEWS | FABULOUS | MONEY | MOTORS | TRAVEL | TECH | DEAR D

OVO AND OUT Ovo Energy customers to lose £60 a year discount for calling or tweeting its customer service team

Under Ovo's "Self Service Reward" you need to use Ovo's digital channels, such as its "Ovo Help" online tool, to find answers to any questions you have

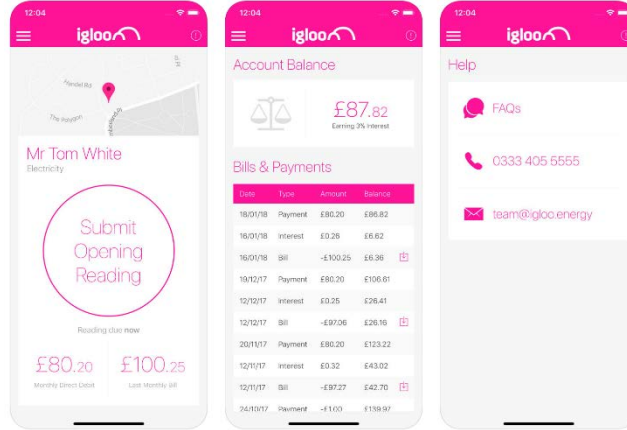
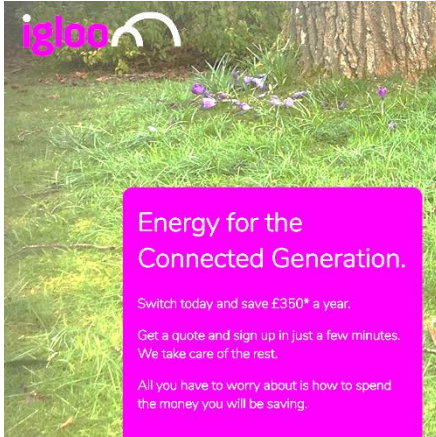
- Digital-Service
- Simple / Transparent / Fair
- Good Service
- Community
- Green

Relationship Impact

Digitally desensitised energy customers.

The Digital Friend

Digital that makes life better, one step at a time



Source: Igloo (UK)

- Digital-Service
- Simple / Transparent
- Great service = Digital and Non-Digital
- Value-for money

Relationship Impact

More digitally trusting customers. More ready for the next steps.

The Advisor

Digital to inform

Source: Duke Energy (US)



We surveyed 50 engagement programmes and all key platform providers



Savings up to

17%

Satisfaction average

89%

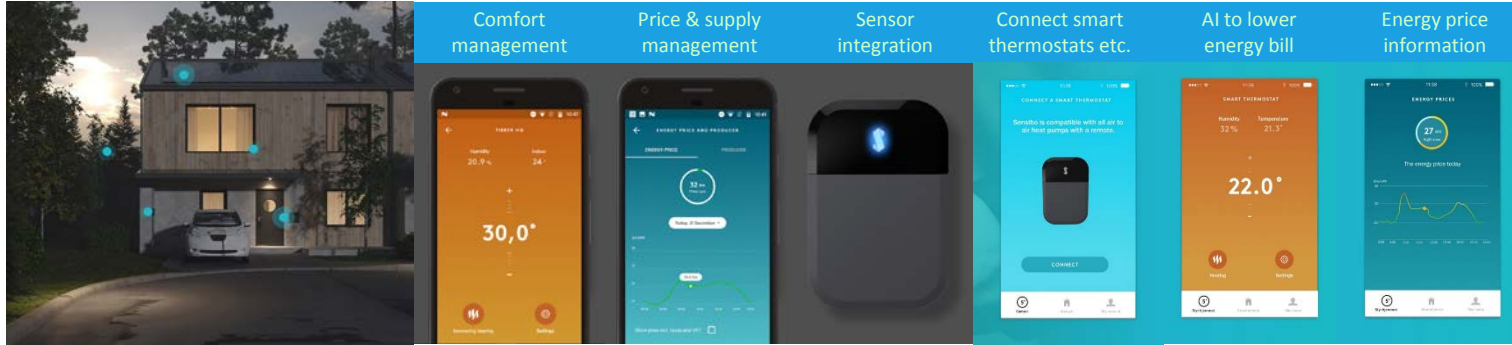
Pilots combining home automation and education/feedback manage are more effective both at reducing peak (23% vs 22%) and overall consumption (2.7% vs. 0.41%). Source: VaasaETT 2017, modeling based on analysis of 100 international pilots*



Relationship Impact	More engaged, aware, enlightened customers; short-term more loyal; long-term disloyal; explanation is not justification
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The Empowerer

Digital for the advanced prosumer



Source: Tibber

Pros	Cons
State-of-Art	Too early for most customers
Affordable energy solution	For high end customers
Replaces traditional retailer with less risk for customer	Requires efficient wholesale market.

- Trading (buy/sell) / Usage
- Home automation / EV charging / P-to-P
- AI / Open digital and mobile platform
- Cost Reduction / Subscription based
- Green

Relationship Impact

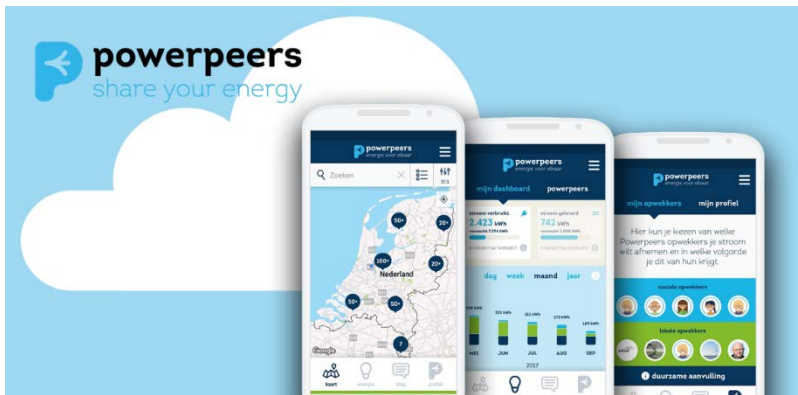
Digital disintermediation - replaces the supplier as the connection to all things energy

The Community Builder

Vaasa

ETT

Digital for the common person



Source: Powerpeers (Netherlands)

- Digital marketplace
- See the actual energy suppliers in the community
- Choose where to get their energy supply
- Insight into consumption and generation
- Empowers consumers and prosumers, digitally
- Continuous engagement

Relationship
Impact

Inserts the energy relationship into the
connected society – deeper engagement

The Community Builder



Digital for the common person



Relationship Impact

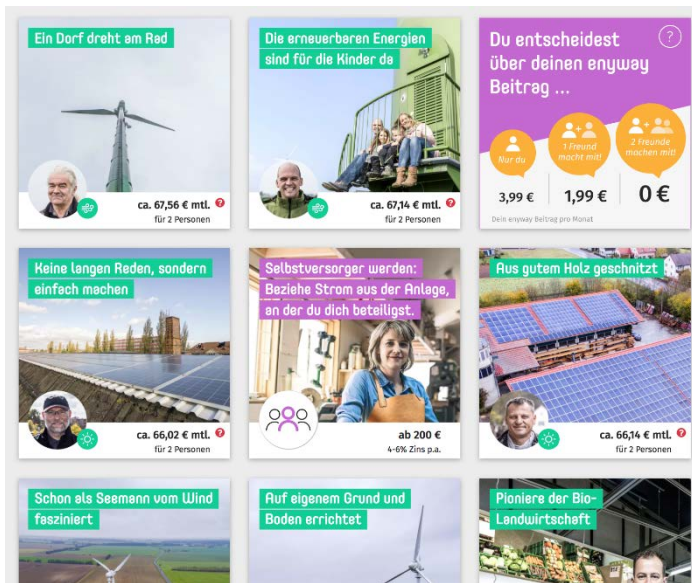
Enables communities to become suppliers through a digital platform



Source: EnergyLocals (Australia)

The Community Builder Vaasa ETT

Digital for the common person



Relationship
Impact

Prosumers become suppliers.

Source: Enyway (Germany)

The Resource Builder



Flexibility, VPP, etc.



Source: Voltalis (France)

Relationship
Impact

The home becomes a resource, a customer, but requires trust, business case & connectivity

- > 100.000 automated homes
- Business Case: Flexibility
- Customer pays: Nothing
- Customer benefit: Energy Savings

The Passifier

Digital that replaces the customer

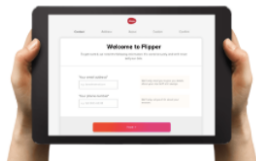
How it works

1

Get started in 60 seconds

Anyone can sign up from anywhere. You don't need to know anything about your energy supply — we just need a few simple bits of information you'll know off the top of your head, and we'll find out the rest for you.

[+ More about signing up](#)



How we work out your savings

energy cost before flip £1,000 /year

energy cost after flip - £600 /year

exit fee - £15

= **£385** real savings

We take exit fees into account when calculating your savings.

2

We find and flip you to your best deal

Introducing Joules The most advanced saving algorithm in the world

We'll find your best energy deal within one working day, taking any exit fees and discounts into account when we calculate your savings. We'll send you the full details of your new tariff and start switching you to it straight away.

[+ More about your best deal](#)

3

You'll never overpay for energy again

Have peace of mind knowing that we'll always keep you on your best energy deal. We check the market every month, and if we find you an even better deal with greater savings, we'll switch you again.



Sign up once, get great energy deals forever.

We'll get you a great deal taking care of everything. When that deal ends, we'll switch you again. You don't need to do anything.

- FREE service
- Two minute signup
- We always keep you on a great deal
- No comparison, no hassle, no worries
- You can sign up even if your deal hasn't ended

Look After My Bills

Source: LookAfterMyBills (UK)

Relationship Impact

Making customers more active by making them less active

Source: Flipper (UK)

The Risk Reverser

Digital moving towards energy as a service



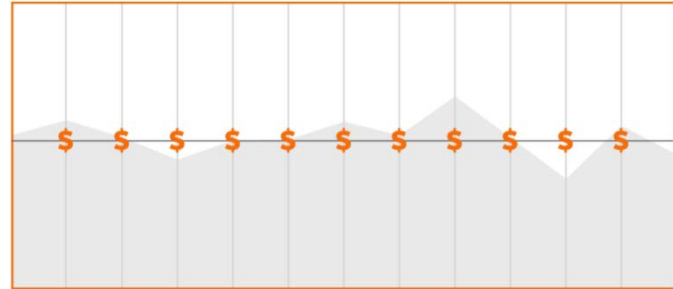
Predictable Plan

Changing the way you pay for energy

Pay the same amount for your electricity or natural gas for 12 months - no price hikes, no nasty surprises.

Our Fair Use Policy applies.

Source: Origin Energy (Australia)



With Predictable Plan we'll calculate your tailored amount by looking at how much energy you've used in the past and how you heat and cool your home.

Relationship
Impact

The retailer takes the risk,
The retailer wins by selling less

Market Design

The future looks complicated



The Digital Society

Most new models are highly digitalised, they need a digitalised audience

Analysis: VaasaETT 2017

	Awareness & Interest	Diversity	Activity	Experience
Connectivity	0.4454	0.6232	0.3415	0.1922
Human Capital	0.5002	0.6899	0.4169	0.3545
Use of Internet	0.23	0.5423	0.3163	0.1814
Integration of Digital Technology	0.5483	0.4652	0.3923	0.2717
Digital Public Services	-0.0075	0.6484	0.4295	-0.1009
DESI overall index	0.4589	0.7238	0.4473	0.253

Diversity of models and offerings is highly correlated with the **degree of digitalisation of society**

Policy Impact

The more digital the society, the more customers will be engaged in digital models

The Digital Divide

Ensuring benefits for all from digital

Membros 1149 Investimento 1 121 250 € Contratos 624

Conheça os nossos projetos [Todos os projetos](#)

Projeto	Status	Investimento Total	Tecnologia	Localização	Região	Potência Instalada (kW pico)	Parceiro
ALFACOOP	Construção	99.000 €	Fotovoltaica	Fátima	Alentejo	108,0 kW	ALFACOOP
Centro da Pegada	Sucesso	75.000 €	Fotovoltaica	Trofa	Norte	700 kW	Centro Social e Paroquial de Santa M...
Cerciespinho	Ativo	100.000 €	Fotovoltaica	Enfite	Alentejo	100,0 kW	Cerciespinho

OUR COMMUNITY PARTNERS

- Wiltshire Wildlife Community Energy
- Chelwood Community Energy Limited
- FRSCO FROME RENEWABLE ENERGY CO-OP
- meadow blue community energy
- Bath & West Community Energy (Renewing local energy)
- Low Carbon Gordon
- ORCHARD Community Energy
- NOTTINGHAMSHIRE COMMUNITY ENERGY
- Bristol Energy Cooperative
- Wight Community Energy
- our community energy
- Heart of England Community Energy
- Sheriffhales Community Energy

Many models will initially be economic only in wealthier segments. Other segments follow.

But some applications make more sense for other segments or work best when mixed segments combine.

Policy Impact

Need to support those models that economically solve current issues for mid-low income groups

Value from Bundling

Bundling is not all bad

Cases	Jurisdiction	Key Model Characteristics																
		Supporting Platform	Alternative financing	Innovative Tariffs	Power of Attorney	Feedback + Advice	DR / Flexibility	Automation	Energy as a Service	Internet of Things	Lifestyle + Comfort	Sales + Trading	Network Autonomy	Electric Vehicles	vpp / Generation	P-to-P	Community	Micro grids
Flipper	GB	X			X													
June	NED	X	X		X	X												
Flick	NZ	X		X		X	X											
RCG Lighthouse	Baltic								X									
Voltalis	FR	X	X					X	X									
British Gas + Hive	US, GB	X	X	X		X		X		X	X							
EDF Smart Home	FR	X	X	X		X	X	X		X	X							
Reposit Power	AUS	X		X		X	X	X			X	X						
Sunplug + EDF	GB	X	X	X				X			X		X					
GEO	GB	X	X			X	X	X		X	X		X					
Sonnen	AUS DE	X	X	X				X	X	X			X					
Tibber	NO	X	X	X		X		X		X		X	X	X				
Swisscom Tiko	CH	X	X	X				X	X					X				
Fortum	FI	X	X	X		X	X	X						X				
Vandebron	NED	X		X							X					X		
Powerpeers	NED	X		X							X					X		
enway	DE	X	X	X							X					X		
Bristol Energy	GB	X		X													X	
RePower	AUS	X	X	X								X				X	X	
Sony	JP	X	-			X			X	X	X	X	X	X	X	X	X	X
EWS	DE	-	X	X					X		X	X	X			X	X	X

Transparency is essential, but so is bundling. Many models depend on it.

Policy Impact

We need to debate how to combine bundling and customer protection.

Micro-suppliers

Enabling a new breed of supplier

Ein Dorf dreht ein Rad
ca. 67,56 € mtl. für 2 Personen

Die erneuerbaren Energien sind für die Kinder da
ca. 67,14 € mtl. für 2 Personen

Du entscheidest über deinen enyway Beitrag ...
3,99 € 1,99 € 0 €

Keine langen Reden, sondern einfach machen
ca. 66,02 € mtl. für 2 Personen

Selbstversorger werden: Beziehe Strom aus der Anlage, an der du dich beteiligst.
ab 200 € 4-6% Zins p.a.

Aus gutem Holz geschnitzt
ca. 66,14 € mtl. für 2 Personen

Schon als Saemann vom Wind fasziniert

Auf eigenem Grund und Boden errichtet

Pioniere der Bio-Landwirtschaft

Find homes on Airbnb

Discover entire homes and private rooms perfect for any trip.

WHERE
Anywhere

CHECK IN
mm/dd/yyyy

CHECK OUT
mm/dd/yyyy

ADULTS
1 adult

CHILDREN
0 children

Search

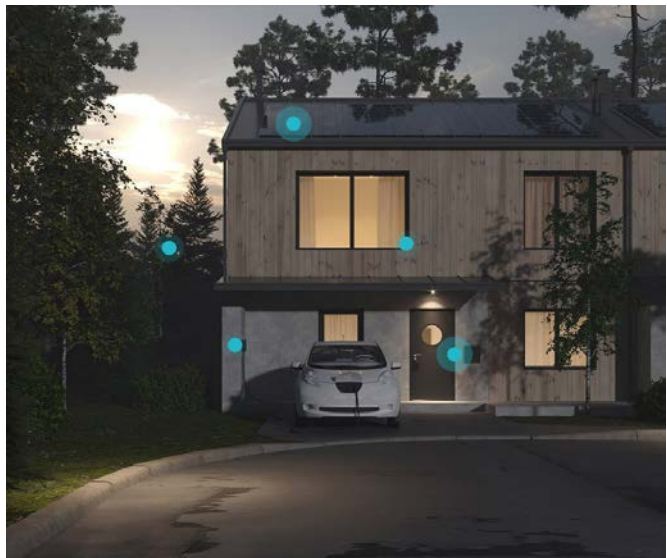
Too many obligations, to evolve from prosumers to micro-suppliers.

Policy Impact

True Peer-to-Peer will not happen until the customer, not the platform, is the supplier

EV Driven Models

EVs are key to the economics of many models



Public infrastructure is important, but don't take away the opportunity for innovative models

Policy
Impact

Allow innovative charging models to flourish.

Access-to-Data

Some data is better than no data



Historical data is complicated to access, even with customer consent, especially prior to service. Makes it difficult to customize offers.

There is a huge amount of data coming from new models, yet smart meters are the only certifiable remote measures.

Policy Impact	There is a need to free up channels to data and enable gatekeepers to be bypassed
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Access for Flexibility

Giving flexibility a chance



There are a lot of unused flexibility resources in the system. The need to be garnered, enabled and empowered.

Policy Impact

Develop true national flexibility marketplaces and enable flexibility to compete for more value

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Thank You

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